

Southern Appalachian Creature Feature Podcasts

Barotrauma

Greetings and welcome to the Southern Appalachian Creature Feature.

While many hold up wind energy as an ideal green energy source, many in the wildlife conservation community are a little hesitant with their enthusiasm. The reason being, those spinning blades can be lethal to flying animals.

Much of the attention about wind turbine impacts to wildlife has focused on birds, but clearly birds aren't the only animals that fly, and bats have suffered before those spinning blades as well.

Most people are aware of how bats use echolocation – sending out sound waves and picking up their reflection – to detect objects. Interestingly echolocation is actually better at detecting moving objects than still ones, so why would bats die at wind turbines – wouldn't their echolocation pick up the spinning blades?

One of the theories holds that it isn't the impact that kills the bats, but rather the shift in air pressure in the vicinity of the rotating blades. This phenomenon is called barotrauma, and it is damage to air-holding body tissue, like lungs, resulting from a significant difference in air pressure within the body and air or water pressure surrounding the body.

A recent study by a team of Canadian biologists and published in the journal *Current Biology* found that while direct impact from turbine blades accounted for 50% of bat deaths in their study areas, 90% of the bat fatalities at wind turbines involved internal bleeding consistent with barotrauma.

For WNCW and the U.S. Fish & Wildlife Service, this is Gary Peeples